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The U.S. and Armaments

Mark S. Watson

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HEADLINE SERIES

THE U.S. AND ARMAMENTS
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One of the most controversial questions in United States foreign policy is whether or not this country's defense preparations are "sufficient." The debate centers on the interpretation of what "sufficiency" means today. President Eisenhower, himself a military expert, believes that the United States is adequately prepared. The President has been challenged on this point by other leading American military experts, and critics of defense policy can be found among Republicans as well as Democrats. What are the facts in this highly complex field? Mark S. Watson, military correspondent of *The Baltimore Sun,* here gives available answers.

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The Author

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The U.S. and Armaments

by Mark S. Watson

A NATION'S MILITARY POLICY, MOST SIMPLY defined, has one unchanging purpose—to support the national objective. But the very fact that it is eternally linked to the national objective means that when foreign policy is altered, military policy must remain linked to it, and hence must itself change. Obviously, military policy must change as quickly as possible, particularly under the rapidly changing conditions of modern technology, but while purposes can be altered instantly, and a new and appropriate declaration can follow with like speed, the new implementation cannot come with equal rapidity.

The military mechanism is complex and ponderous; its personnel, trained to obey, must first find out exactly what it is now expected to obey and how to do so most effectively. Its very equipment and installations are designed to cope with a stated set of problems, and if a radically new problem is posed, there will be delay in adjusting the old mechanism to the new requirements. For example, a purely defensive posture (in the strict meaning of that term) is not ideally designed for every sort of military operation. At times the United States seems so concerned with the concept of keeping our purely defensive posture that we

neglect the requirements of an offensive, large or small, which may be suddenly called for. An altered posture usually calls for more or different troops, weapons and equipment, and these necessities do not spring into being upon the writing of an official paper. To give two examples, our declarations of a state of war in April 1917 and in December 1941 were clear enough statements of policy, but in each case many, many months had to pass before the military could catch up with the nation's purpose.

Politics, Technology Change U.S. Role

The United States has been slow to recognize the basic fact that national policy declarations are hollow unless the means of military enforcement are in a fair state of readiness. Indeed, it has been slow to recognize the related fact that war itself is a means of gaining a political end. A generation ago few Americans could accept the doctrine which Clausewitz stated epigrammatically when he wrote that "war is not merely a political act but a real political instrument, a continuation of political intercourse, a carrying out of the same by other means." For that matter, relatively few had ever heard of Clausewitz. Such recognition of the need for a policy-power relationship as now exists may have been forced upon us, not so much by experience in two world wars as by acknowledgement that the threat of yet another and possibly more devastating war has an unmistakable political origin. But beyond this, no one can any longer ignore the fact of a radical transformation in our foreign policy, which began with the emergence of a politically new world from the ruins of 1945.

In the peacetime years which preceded world wars I and II, this nation's foreign policy was pretty generally shaped by current events, and automatically these same current events kept forcing only a step-by-step readjustment of our military policy, such as it then was. The popular reasoning in 1914-17 and in 1939-41 was that the troubles abroad were not "our" concern.

There was also little sense of urgency, because our prospective allies in Western Europe and Russia apparently could keep going (with our very considerable aid in munitions and equipment) while our full combat resources were being assembled over a period of many months for eventual action. In both wars we entered fully into combat only at a very late stage.

U.S. Now Leader

Since 1945 such behavior on our part has proved no longer possible. The political world has changed. No near balance of power such as existed in 1914 and 1939 between our potential foes and our potential allies exists today. And meanwhile technology has completely changed military planning both in time and in space. The oceans which once provided a reliable protection for North America have been shrunk to very small barriers indeed by the destructive power of the new thermonuclear warhead combined with the new long-range ballistic missile. Either the technological revolution or the alteration of the political world would have forced a change in the former defense policy of the United States; the conjunction of the two has made the need of change dreadfully apparent. Has the change been productive of a truly firm policy, fully accepted and logically accompanied by a military potential capable of supporting that policy against a powerful, resourceful, determined antagonist?

Isolationism, which still had a considerable following a half-generation ago, today is only a memory. No longer is the United States merely an equal partner in a group of "associated" nations, as President Woodrow Wilson put it. Today the United States is the leader of the non-Communist coalition. It is dominant in wealth, in industrial production, in military power, in much of the science-*cum*-technology essential to still greater military and economic power. And, just as surely, it has no rational alternative to asserting the leadership which it clearly possesses through such resources. This is not a matter of opportunity so

much as it is of obligation; a nation which seeks safety by burying its talents in the ground instead of putting them to work is pretty sure in time to lose all, as did the Biblical Wicked And Slothful Servant. Leadership, whether of men or of nations, carries responsibilities which cannot be ignored.

Leadership by Obligation, not Choice

Nobody in our time has recognized that obligation more clearly than did George C. Marshall, whose plan, named in his honor, was the first in a great chain of events bringing immeasurable relief to a broken and well-nigh despairing group of nations in war-devastated Europe. The Marshall Plan's emphasis was on economic aid which would sustain weaker nations and enable them to help themselves back to full strength, so that they could sustain world peace. The plan made clear that the United States would meet its obligations as a leader. And where military assistance was a requisite to economic and political recovery, military assistance would be added.

The Marshall Plan was a completely realistic statement of the basic relationship of national policy and military implementation. It was accompanied by an equally sound reminder that in helping other nations back toward recovery the United States was unmistakably helping itself. This has remained an essential element of United States defense policy, supported as heartily by our military as by our political chiefs. The knowledge that in Western and Southern Europe, in the Middle East and in the Far East, our old and new allies, having been aided by us, can thereby the better defend the common interests of the alliance as a whole is a major justification for the mutual assistance program as a prime element of our total defense policy.

What is disputed in Congress is not so much the principle of military aid as the cost involved, plus the question of how long the aid to a given nation must continue. On the principle of aid, under both Democrats and Republicans, the Administration

"Nuclear nations ought to pledge themselves not to release stocks of nuclear weapons to other nations" — says an optimist
INSPECTION SEISMOGRAPH
LOW

UNDERGROUND TEST

(Low, World Copyright by arrangement with *The Guardian*, Manchester)

has held firm, year by year. It has to be firm, for the annual amounts of such aid must be stated in its budget recommendation and clearly argued. The question of how long our aid will continue is forecast at longer range and with much less positiveness. The extent of aid can in its way be described much as is the size of defense appropriations generally—it should be "sufficient to deter war," the term President Eisenhower used in a broader context in his budget message of January 18, 1960, in which he said:

"Our national objective remains as before—peace with justice for all peoples. . . . While seeking the true road to peace and disarmament we must remain strong. Our aim at this time is a level of military strength which, together with that of our allies, is sufficient to deter wars, large or small, while we strive to find a way to reduce the threat of war."

New Kind of War

NOW WHAT IS "SUFFICIENT" TO DETER WARS? Or, as is often asked about specific requests, "what is enough," as judged by the Administration, by the "outspoken" members of Congress, by the military professionals, by important groups of citizens? In other words, what are the outstanding aspects of our present defense policy?

Today our concept of defense is more complex than it was in past years, when efficacy in field combat overshadowed all other purposes. To be sure, our World War II statesmen demanded "unconditional surrender." But some of our military professionals, too, recall with embarrassment their total concentration, in 1945 as in 1918, on a victory to be won primarily by arms, a victory which in each instance we attained only to find, within a few months, that the winning of a war was less difficult than the winning of peace. Today, our World War II experience, combined with observation of adroit Communist techniques in postwar years, has created an awareness that victories of a massive nature can be won with political, psychological and economic weapons as well as with A-bombs—usually with more enduring results and certainly at much smaller cost in blood and treasure.

Difficulties of Cold War

Now this, to be sure, is simply rediscovery of what had been known in past ages. Alexander the Great knew it and put it to

use. A perceptive new study of that conqueror's political arts by Maj. Gen. J. F. C. Fuller, *The Generalship of Alexander the Great,* with unflattering comparison to our own statesmen's World War II behavior, notes Alexander's deftness in transforming enemies into allies, thereby freeing himself from anxiety over his lines of communication and enabling him to spend his own resources to the full advantage of his main mission. In our time the U.S.S.R., for all its occasional clumsiness in diplomacy, has demonstrated its extraordinary ability to gain an objective by political and psychological means accompanied by a suggestion of military power rather than by immediate resort to massive power alone.

The arts of the Communists, not exclusively Russian, are too often much more ingenious than our own, and are executed with undiscourageable determination, plus a ruthless disregard for truth and conventional decency, plus a physical tirelessness, plus remarkable patience, plus a moral fervor which a softer non-Communist world simply cannot seem to maintain over a long period of time. War, hot or cold, provides an atmosphere in which the trained Communist breathes freely and happily, year after year. For the democracies, which regard peace as the ideal state and war as something to be ended as soon as possible and at a considerable sacrifice if need be, endless conflict either in dialectics or in border quarrels is intolerable.

A Never-ending Struggle

Fundamentally, therefore, Americans as a nation face a great difficulty in their involuntary participation in a cold war. For one of the most obvious characteristics of the cold war is that, instead of reaching a dramatic climax and a decision, even if it is not really decisive, which brings us back to our "normal" peace, the cold war goes on and on indefinitely. There is no overwhelming defeat or victory, hence no decision, and hence no end. The impatient American, desperately anxious to be rid of end-

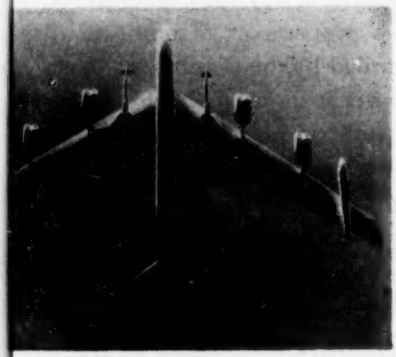
less quarreling and wearisome argument over the same issue, and to get on with work in his normal world, is inclined to cry out, "A plague on you," and then concede a point in the argument in the hope of bringing the dispute to an end—only to find that his foe accepts the concession, tucks it away, and implacably resumes the cold war in exactly the same tempo and with the same arguments, but this time from an improved position. Admiral C. Turner Joy, while still rankling from his infuriating experience in the Korean negotiations, provided a memorable example of this process in his book, *How Communists Negotiate.*

But if the American civilian finds it difficult to keep on fighting without fighting with arms, the American military faces an added problem. The soldier is traditionally aloof from policy-making, which, he has been taught for generations, is the business of the statesman, his own duty being but to obey. Only in recent years, and in the advanced professional schools, has a start been made in the new proficiency of war, with recognition that, far more than ever in the past, a war can be conducted with economic, political and psychological weapons, with deception and subversion as adroit and as unscrupulous as Communist ingenuity can devise.

New Methods Needed

The rugged virtues of the simple soldier remain indispensable, but, beyond this, *somebody* must be trained to cope with the devices of a foe who is very far from being either chivalrous or simple. This is a harsh and unpleasant fact. So is the fact of chemical, biological and radiological warfare (CBR, to which there will be reference later), and so, in the opinions of the layman, are most of the other aspects of war. However, unpleasant as the fact may be, it is certain that our most-likely enemy habitually employs warfare methods which, whether because of their unconventionality or because of their plain foulness (maltreatment of prisoners and wounded, brain-washing prisoners, and so on), have not been included in the American's traditional armory.

▲ Snark in flight
(surface-to-surface missile,
in operation)



▲ Hound Dog,
as carried by a Boeing B-52
(in operation)

Bomarc A
surface-to-air
missile
being launched ▶

◀ X-15 (space ship,
which recently rode
to a height of
131,000 ft. during
a test flight, and
has broken the
speed record)

(Official U.S.
Air Force Photos)

There is no longer any use denying the necessity of our own readiness to cope with such weapons, always defensively, sometimes counteroffensively and on occasion—in the case of justifiable economic, political and psychological weapons—actually in an aggressive way from the start. A great deal of our foreign aid activity, wholly benign as is the grant of food or direct economic aid or technical assistance to a needy nation, must be thought of as having also its "aggressive" aspect, however philanthropically performed. It should be recognized as our most enlightened form of cold warfare, undeniably a proper part of our over-all defense policy, and certainly so regarded by the Communist agencies which persistently strive to thwart it by means such as their notorious relabeling of American food shipments into the Middle East to "prove" that they came from Moscow. More alert than we are in this respect, the Communists are quick to realize that our economic aid to neutralist nations is in many instances a weapon of even greater potential than a battery of our artillery. They are quicker to counter it than we are to recognize their intention. This is one of the major aspects of the cold war.

Considerable space has been devoted here to this aspect of our defense policy on the reasoning that a very large part of the nation's defense planning must concern itself with the weaponry of the politico-economic-psychologic conflict, which is a constant activity of the Communist world in both declared and undeclared war and for that reason is becoming a necessary part of our own defense activities. If the expanding technologies of rockets, missiles, atomic energy and electronic magic are largely new, so, in this nation's practice, are the technologies of the less violent but no less effective weapons with which communism conducts its cold war upon us. Our new defense policy must take cognizance of these weapons, find a way to counter them, adopt many of them, and work intelligently with those we adopt.

New Weapons

MEANWHILE, OF COURSE, OUR DEFENSE POLICY must continue to develop and produce all the weapons required for the military's historic role of supporting the nation's policy with arms if need be. To do so, as already noted, the military policy of yesterday requires revolutionary changes not merely in pattern or in extent but first of all in basic thinking, partly because of the revolution in weapons, which requires major alterations in support systems, in organization, in tactics and in strategy, partly because of the new importance of the politico-economic-psychologic factor.

The extent of changes in thinking is shown in the record of the past three years, when quasi-public commissions of thoughtful private citizens, as well as the White House, the Capitol and the Pentagon, have been struggling with the following seven fundamental questions of policy-making:

1. *"Large" or "Small" Wars?* Is it true that massive weapons alone can win a "large" war or, quite as important, deter an enemy from starting out with a "small" local war (18 of which have been fought since 1945, without a single nuclear weapon being used or seriously threatened)? Or is it true that the non-massive weapons actually are better suited for suppressing fringe conflicts in the early stages, as in the case of Greece, Taiwan, Lebanon?

2. *How Much Armament?* Recognizing that a sufficiency of massive weapons is unmistakably required to deter enemy aggression against the free world or, if need be, to resist it successfully, how much *is* that sufficiency? How many different types of weapons should there be for use on land, at sea, in the air and in outer space? How many of each type? This applies to the Air Force's intercontinental ballistic missiles (ICBM's) of the present and immediate future, to the intermediate-range ballistic missiles (IRBM's) such as those of the Polaris submarine, which promises to become our most treasured deterrent, to an air-launched type such as the projected Sky Bolt to prolong the usefulness of our strategic bombers, and to a land-based type after the pattern of the Army's new Pershing or a reconfigured Sky Bolt.

3. *Does U.S. Have Enough Conventional Weapons?* Have we anywhere near a sufficiency of these nonmassive weapons and conventional forces (the comparison being always made between our 14 ready Army divisions, plus 3 Marine divisions, and Russia's reputed 175)? Do we still calculate on using our "small," tactical nuclear weapons as an equalizer against such a ponderous foe and on the possibility that use of a small A-weapon will lead to reprisal with a massive one? Do we plan (and when?) to endow these modest field forces with maximum efficiency through the mobility provided by such new planes, helicopters, amphibians and low-pressure carriers as the Army has developed but has not been able to acquire in quantity? Do we plan (and how soon?) to modernize them fully also with respect to advanced electronic instruments for surveillance, detection, computation, remote command and communications?

4. *How About CBR Warfare?* Are we ready to cope with the disturbing peril of yet another type of warfare neither nuclear nor conventional, namely, the CBR type previously mentioned, employing gases whether lethal or temporarily disabling, or the insidious biological infiltrations of air and water for destroying crops and food animals, or radioactive particles with their grave

effects on the race itself? Public repugnance to the use of such "terror" weaponry is so great that it has hitherto been discussed only cautiously, with an implication that the Army's development of toxic gases was primarily to help in devising defensive equipment against them. Yet this year CBR has been discussed openly by the Army's research chief, Lt. Gen. Arthur G. Trudeau, as on April 13, 1960, in Dugway, Utah, before an Army scientific advisory panel. He declared that the U.S.S.R. already has developed high efficiency both in offensive use of the new gases and in defenses against them (with civilians taking compulsory training in defense methods and with suitable masks, clothing and ointments on issue to all combat forces); General Trudeau added that he himself finds gases less atrocious than gunfire. It is significant that he spoke publicly of the need to develop the offensive capabilities of toxic gases and that his civilian superiors have not shown any objection to his remarks. Incidentally, soon after World War I Capt. B. H. Liddell Hart, the British military analyst, urged gas as far less lethal than guns yet far more effective in battle. His newest book, *Deterrent or Defense,* again makes this point.

5. *How Much Money for Prolonged Warfare?* When the big-spending, glamorous weapons are accounted for, is there enough money left over for the bread-and-butter items required not only for "small" limited wars but for providing the military muscle needed in the second phase of a war starting with a nuclear blast?

The question is important for the Army, whose chiefs of staff consistently have pressed for more modernizing of their conventional forces, as well as for the Navy, which last spring was shocked, for the second year in succession, by rejection in the House of Representatives of its almost frantic plea for its eighth big carrier. (Facing Administration and Senate insistence, the House later relented.) The Navy, seeking a balanced fleet, in making up a budget to stay under the imposed fund-ceiling, had sacrificed submarines, destroyers and other desired items in order

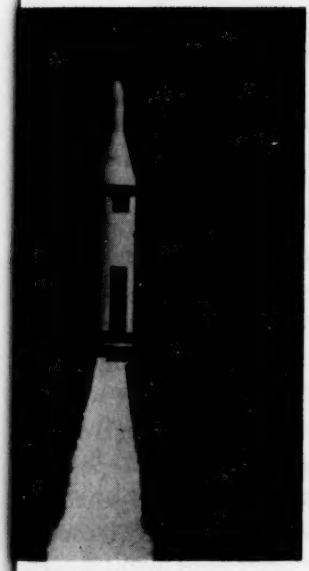
to get its most important objective, the new attack-carrier. The fleet requires 14; its present 14, which are not all new attack carriers, include some which are too small to accommodate the new planes and thus play their full role, and too old in years as well as design to stay much longer in the attack role. The Navy keeps trying to replace the old types with the new ones.

The Navy has a mightier role than most landsmen understand—to control the seas over which 95 percent of our supplies must move; to balk an enemy's underseas operations; to make possible our own (a vital need in the operation of Polaris); to furnish (by the ships' great mobility and prolonged independence of shore bases) a means of conducting either strategic or tactical warfare and supporting the other services in their attacks and their defense from enemy attacks; and to provide in cold war, by the fleet's mere presence, the calming influence which on countless occasions has nipped an alien uprising in the bud—with Taiwan and Lebanon affording recent examples.

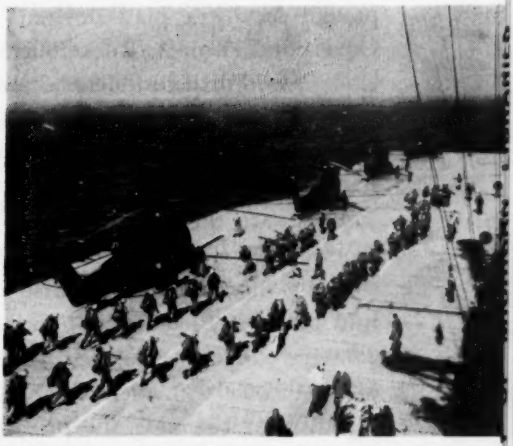
6. *Defense from Massive Weapons.* What must we do, and how soon, to defend our own people from the enemy's massive weapons of the near future?

Canada has joined with us to form the North American Air Defense (NORAD). At present it is potent against an enemy's attack with subsonic, airbreathing bomber planes—planes which need air for combustion. Nobody believes, however, that it could even discourage an ICBM attack. The only weapon now under development for that purpose is the Army's Nike-Zeus, on which a good deal of money is being spent for advanced development but not yet a cent for anything resembling "production"—despite the fact that if speed in readiness is required, a great deal must be spent on long-lead-time items. On no other issue does the Army show greater genuine anger against the Administration's "economy" policy and its repercussions within the Pentagon. This fight for speeding up a promising anti-ICBM missile is nowhere near

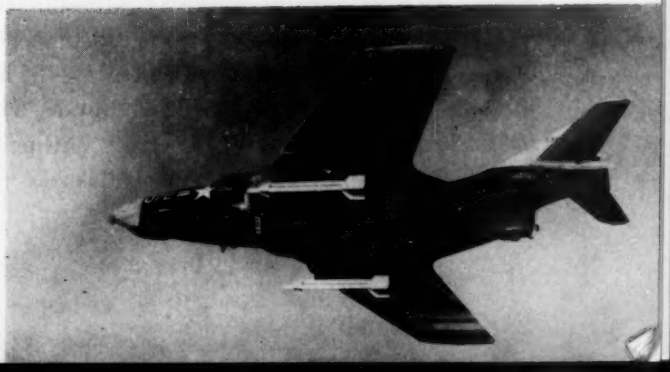
◀ Sparrow III
(air-to-air missile,
in operation)



▲ Polaris
(submarine-launched
missile, operational
this fall)



▲ Marines prepare to board HRS Helicopter on deck of USS Tarawa (CVS-40) for amphibious exercises—more of their "vertical envelopment" technique



Sidewinder
(Navy, air-to-air
missile, used also ▶
by Marines and
Air Force)

(Official U.S. Navy
Photographs)

over. Zeus, if perfected, would be an "active" defense against the ICBM.

7. *Role of Civil Defense.* The other great question we face is about "passive" defenses, through the Civil Defense. With the massive-weapons threat of, say, 1964 expected to be incomparably greater than was the bombing threat against Britain and Germany in World War II, the United States is doing incomparably less to cope with it. The civilian lives that could be saved by shelters, in case of ICBM or IRBM attack on the cities, cannot be calculated. Yet today hardly a shelter is prepared or even contemplated, hardly a plan devised (except for the suggestions of Governor Nelson A. Rockefeller of New York), hardly a respectable air-raid drill conducted, hardly an outline of relief or refuge or emergency administration faintly envisaged by the people themselves who, under an ICBM attack, would have to be in some state of readiness or risk death.

These are the outstanding large problems of defense policy. They are here put in the form of questions for the simple reason that a policy can hardly be so identified unless it is translated into practice. In most of the areas just described the President's January budget message briefly argued the reasons for a total sum of $40,995,000,000, including moneys for specific purposes while rejecting or reducing the programmed spending for other purposes. The fact that after months of deliberation the proposed 1960-61 House appropriation of $39,337,867,000 totaled almost exactly the same amount as that of the President's revised recommendations would have indicated greater agreement with those recommendations if it had not shown such wide variation in major items—of something like $4 billion. Subsequently, and no doubt largely influenced by Khrushchev's insulting breakup of the Paris summit conference of May 16, by Mao Tse-tung's threatening statements, by the U-2 episode, by belated attention to Khrushchev's January 14, 1960 outline of communism's strategic principles and by Fidel Castro's fulminations from

Havana—the Senate voted a defense appropriation $1.18 billion larger than either the House total or the President's recommendation, and this by an impressive vote of 85-0. The resulting Senate-House compromise, completed by congressional vote on June 30, gave a final authorization of $39,996,608,000, $661,000,000 in excess of the President's revised (April) request. The total change was less significant than the much sharper increase by 16 percent in the vital items of procurement, and by Congress's provision of a faster push toward the strengthening of our submarine forces, a sizable increase in troop-and-cargo airlift, a warmer support of the Air Force's newest conventional bomber project (the B-70, which is designed to fly at three times the speed of sound and at loftier altitudes than any plane of today) and a much heartier support of the Army's request for modernization.

Support of President—and Criticism

Judgments on the exact amounts needed for military and for foreign aid grants as well have varied widely, and not only because of party differences or civilian-military conflict. The President's wishes have been stated many times, in formal documents and in his offhand replies to press conference queries. He has plainly shown disinclination to accept the views of others on the nation's military needs, and his own ideas have frequently been echoed by Defense Secretary Thomas S. Gates, Jr., regarding both the nation's "intact and sensible" state of readiness and the critical need for the full amount of foreign aid requested. On this latter point, former President Truman, who has differed with his successor on many issues, has been in full sympathy with him—and not surprisingly, for it was under Mr. Truman that our foreign aid programs first took form. Another studied defense of the President's policy in general, again not surprisingly, was made on June 19 by a task force of the House Republican Policy Committee, headed by Representative Gerald R. Ford, Jr., of Michi-

gan, after four-months' scrutiny. Yet another point of view, which goes even further than the President's in urging economies, was presented on March 31 to the House Subcommittee on Department of Defense Appropriations by Otto Nelson, representing the National Defense Committee of the Chamber of Commerce of the United States.

Of the statements stoutly opposing the President's specific wishes and, indeed, finding faults also in much of the organization and practice at the Pentagon for which Mr. Eisenhower has been largely responsible, some of the most reasoned have come from the President's long-time military subordinate, General Maxwell D. Taylor, former chief-of-staff. These have been fully stated both in his book, *The Uncertain Trumpet* (Harper, 1960), devoted largely to criticism of the President, and in the June 15-16 testimony which Taylor gave before Senator Henry M. Jackson's Subcommittee on National Policy Machinery. Our defense outlay, General Taylor insisted, is far from adequate, amounting currently to about one half of Russia's as related to the Gross National Product (GNP) of the two nations. The Army's acquisition of modern equipment, in particular, should be more than doubled this year and for four years to come, according to Taylor. The budgeting process he describes as "obsolete" on the ground that it is determined by the functions of the separate services rather than by the over-all defense requirements which a clearly defined national strategy ought to outline. General Taylor further contends that the Joint Chiefs of Staff structure is faulty in that the several chiefs remain so tied to the direction of their respective services that they have neither time nor opportunity for proper planning of a combined strategy.

Array of Recommendations

In the criticism of inadequate funds, particularly for Army modernizing, Senator Jackson has joined warmly, both as an individual and as the energetic chairman of his Senate subcom-

mittee, whose record provides some of this year's most useful discussions of defense policies and measures. Senator Jackson was largely responsible for the Senate's 1960 emphasis on more Army purchases. The House, too, was so well disposed to accept this emphasis that the final defense appropriations document completed at the Capitol on June 30 carried $162,102,000 more for Army modernization than the President had favored. The Senate Preparedness Investigating Subcommittee, headed by Senator Lyndon B. Johnson, Democrat of Texas, has also made a series of constructive critical reports, that of June 24, 1960 in particular urging much swifter modernizing of Army weapons.

Senator Stuart Symington, Democrat of Missouri, a former Air Force secretary, has consistently pressed for increased military expenditures, but has particularly stressed the needs of the Air Force both in planes and in missiles. More persistently than others he has attacked the "missile gap" between ready supplies of missiles in Russia and those in the United States.

Outside Washington, Governor Nelson A. Rockefeller of New York, to the manifest distress of his Republican colleagues at the Governors' Conference at Glacier National Park, Montana, June 27-29, made some of the sharpest criticisms of the national defense policy and its implementation that civilian critics have offered. His citation of facts and his ensuing arguments, more detailed in this respect than in two previous declarations which had already attracted national attention, evidenced a large degree of agreement with General Taylor and other critics of current national policy. The points of difference between Rockefeller and the Administration are too numerous, too clearly marked and too earnestly argued to be regarded as due merely to "political" reasons.

In many categories the defense policies of President and Congress coincide, but there is too much variation between them and, beyond President and Congress, too much plain disagreement about important items and concepts, on the part of both military

professionals and civilian commissions, for the public to feel that the national defense policy is as firm as the nation could wish it to be in the midst of a cold war which has a great many dangerously warm periods.

Role of President—

It is therefore difficult at the present time to state in precise terms either the direction or the limits of the nation's military policy. The armed services have a commander-in-chief, by constitutional declaration and by practice alike, who is the President of the United States. Since 1953, under President Eisenhower, a professional military man, the command powers have been exercised both intensively and without interruption. The President's own conviction, frankly admitted on occasion, is that he knows more about military matters than the rest of the country, and it is obvious that this view is shared by a large majority of his fellow citizens.

Yet strong dissenters from the President's opinions have appeared from time to time, some of them professional military men of comparable experience in their respective services and some of them equally distinguished civilians, members of the commissions which have closely examined our military requirements in the light of the new warfare. Their dissents have rarely altered the President's planning and at times have seemed, rather, to harden his judgments. Even so, they have had an effect on the thinking in Congress, whose constitutional duty in policy-making is undeniable and whose powers in that respect are substantial.

—And of Congress

Congress has revealed its own doubts and disagreements by encouraging the dissenters to argue their points before the armed services, the appropriations committees and numerous *ad hoc* subcommittees, and ultimately by altering, sometimes violently, the White House's proposals for military authorizations

and expenditures, as in the Defense Appropriation Act of this year. Yet the President will have the last say in some, but not all, respects. That is, he can determine that a given congressional appropriation permits him to make a particular expenditure, but does not require him to do so. In 1959, for example, he firmly declined to do several things which Congress "permitted," precisely as President Harry S. Truman in his day declined to spend a large round sum which Congress clearly wished him to spend on bomber-fleet increases. In the unique case of keeping up the existing strength of the National Guard and Army Reserves which the President had recommended reducing by 10 percent from their existing 400,000 and 300,000 totals respectively, the contrary wishes of Congress in 1959 were so firmly stated that the President had to yield. This year he repeated his 1959 recommendation, but without any greater effect on a Congress which is traditionally sympathetic to the citizen-soldiers, and he lost once more on that issue.

President Has Last Word

In another respect the Commander-in-Chief of the armed services has recently acquired, and employed, a means of "bending" appropriations moneys to fit his requirements. This is by exercising his authority to shift a percentage of moneys formally dedicated to specific items, and transferring them to other items, as a changing situation justifies. He, or the Secretary of Defense, who naturally is completely responsive to the Administration's firmly stated wishes, exercises this authority consistently and, on the whole, without serious protest from a Congress which recognizes perforce that (1) this is a right which Congress itself granted, and (2) requirements and capabilities do change on very short notice, and the Executive branch must be regarded as competent to readjust its operations to fit an altered situation.

Accordingly, while the nation's constitutional and procedural practices do, and should, allow Congress to question and correct

the Executive's program and also to exercise on occasion that very large control which command of the purse strings permits, the nation's military policy is fundamentally set and maintained at the White House, precisely as is the nation's foreign policy, which defense is designed to support, and to which it must be continuously adjusted and readjusted.

From this it follows that when our basic foreign policy is altered, the supporting military policy must be questioned, and questioned very searchingly. It also follows that even with a generally unchanged foreign policy, the military means of supporting it must be continuously reviewed, partly to correct an earlier miscalculation, partly to cope with new technologies and with the new practices, both tactical and strategic, which these new technologies suggest to the watchful military.

Specifically, in this latter area, we must bear in mind the new capabilities of missiles already in existence; looking to the future, we must consider the possible capabilities of satellites and space ships whose potentialities are impossible to predict with assurance; and still further, perhaps, of the chemical-biological-radiological weaponry emerging slowly from research laboratories, which suggests wholly new tactics. The fission bombs of 1945, which at the time were variously thought of as sure (optimistically) to end war for all time, or equally sure (pessimistically) to end the world instead, have achieved neither end as yet, and already, in their 1945 form, are merely disagreeable antiques, so radically have their powers been exceeded by both the fission bombs and fusion bombs now available.

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U.S. Military Policy

GIVEN THE OFTEN UNPREDICTABLE CIRCUMSTANCES of warfare in the second half of the 20th century, how do we plan, today, to cope with all this? What are the major aspects of the nation's present and frequently fluid military policy?

Prevention of War

Its dominant purpose, it is important to note, is to *prevent* war. It is the business of civilian authority to go as far as possible toward eliminating the causes of war in general, and of any war in particular; and it is the first duty of the military to stand in readiness to support that effort.

"War in general" certainly was discouraged, and many think actually prevented, during the years closely following 1945, by our unique possession of the A-bomb of that day. "War in particular" was averted much more recently in the cases of Quemoy-Matsu and Lebanon, both in 1958, not by our visible display of atomic weapons, but by our prompt dispatch of conventional military forces to the endangered areas, again without actual exertion of force by American military personnel. In other instances since 1945 peace has indeed been restored by the sword—notably in Greece in 1949 by our military leadership in the field, and in Korea in 1950 by necessary use of very considerable land, sea and air forces (from the United States, the Republic of Korea, and other countries under the sponsorship of the United Nations)

—but without atomic weapons. In yet another category is the 1948-49 Berlin airlift, in which the determination of the West, coupled with the skill of an American and British cargo-airplane operation, again sufficed to maintain both the peace and a relatively free Berlin without the firing of a weapon. The thing to remember about Berlin, however, is that there never was any doubt that the weapon was at hand if use of it should have proved necessary.

Role of NATO

The North Atlantic Treaty Organization is the most impressive example of the policy of preventing war. Western Europe had been uneasy for some time before 1949, and had created its own Western European Union, with hopes which were larger than resources. It was Moscow's continued threats and, specifically, the Communist coup in Czechoslovakia, which led, next, in 1949 to the signing of the North Atlantic Treaty, in whose organization, NATO, the United States and Canada became partners of Western Europe; NATO's military structure was established in December 1950 with its Supreme Command in Europe given to General Dwight D. Eisenhower.

It was undoubtedly General Eisenhower's extraordinary gift of leadership, fully supported by the firmness of President Truman and Congress, which laid the foundation for the success which NATO has attained. Today, half-way through the 20-year initial period of life allotted to it by the 1949 treaty, NATO remains not only the symbol but the material and moral expression of a united West's determination and ability to maintain freedom where freedom still survives. Its means of doing so and its extension of operating methods call for as continuous a review as does United States military policy. Indeed, the maintenance of NATO as a veritable bulwark of the West's defense and as an indispensable overseas safeguard of the United States itself remains basic to our military policy.

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Changes in NATO

This does not mean that NATO itself has remained unchanged since 1949. The alliance's membership has already been increased, first by the addition of Greece and Turkey in 1952, and then by that of West Germany in 1955, and these additions have added greatly to NATO's military, political and psychological potential. Its members' military participation has changed, especially in the over-all concept of how many divisions, for instance, the force requires to form a "shield" against Soviet attack—and can acquire from its members. Originally there was vague talk of 100 NATO divisions deployed and in reserve. Realism shortly caused revision of this figure to 45 (that is, in the Central European sector, for the contributions of Greece, Turkey and Italy are properly assigned within their own frontiers); and this revised total was once more reduced to a supposedly attainable 30, supported by the new tactical atomic weapons which were thought of as a proper substitute for a number of divisions. Today's actual NATO deployment in Central Europe consists of twenty-one and one-third divisions (West Germany, seven; United States, five, plus powerful support units; Britain, three; France, two; Belgium, two; Netherlands, two; and Canada, a brigade).

NATO Strength Not Enough

General Lauris Norstad, who today holds General Eisenhower's old post as Supreme Allied Commander in Europe, is convinced that this is not enough, even with the greater efficiency of NATO's air element, and that the missing eight-plus divisions should be supplied as quickly as possible. West Germany is expected to provide its own five additional divisions (a total of twelve) by mid-1961, but neither they nor numerous others in the existing NATO European command can be thought of as actually seasoned and combat-ready. Britain withdrew elements from the British Army of the Rhine in 1957, when the government's defense economizing made it necessary; and France withdrew veteran units for use in

its five-year-old war in Algeria. Both withdrawals were permitted by the NATO Council on the sound reasoning that the council could do nothing else. In some minor cases, again for reasons of economy, there has been less conspicuous weakening, not in divisional strength so much as in a shortened period of conscription and hence in a lessening of individual training and combat readiness; in the main there has been stout political support of NATO objectives by all its members, large and small.

The United States, from across the Atlantic, has kept up its own full support in combat units of land, air and sea forces (the United States Navy providing both command and principal strength for NATO in both the Atlantic and the Mediterranean), and has immeasurably increased the potential of the entire NATO strength by placement of missile-support units at critical points in the Allied deployment. The immense firepower of these units is provided by missiles with atomic capability; that is, with conventional warheads and, for alternative use, with atomic warheads whose actual use is (by congressional order) dependent upon authorization by the President of the United States as well as upon approval from the country in which the weapons are deployed. Canada, too, has been quite true to her NATO commitments although equally remote as the United States from the Iron Curtain.

Other Military Alliances

The alliance principle so well illustrated by NATO, of a common defense through mutual reliance and mutual support, by "equality, not in wealth, but in loyalty and effort and sacrifice," in General Eisenhower's inspiring words of a decade ago, is set up elsewhere, by multilateral compacts in the Far East, the Southeast Asia Treaty Organization (SEATO), and in the Middle East by the revised form of the ill-fated Baghdad pact, the Central Treaty Organization (CENTO), and by bilateral compacts with 45 separate countries under our Mutual Security Program.

Not many of these alliances are as firm as the NATO compact, nor is it reasonable to think that they could be, so one-sided are

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many of the arrangements, so unready is the junior partner for administration or any other aspect of partnership, so unclear is the real need as determined by the threat to its sovereignty or viability.

Better Planning Required

In a good many cases, as congressional critics have easily pointed out, our own senior-partner activities have been clumsy and fruitless, if not actually ill-advised, owing to over-hasty planning and performance. It is unfortunate that an impatient, if natural, irritation over our own officials' blunders or over the waste caused by inexperience, incompetence and unreliability of a junior-partner's officials, has produced resentment not only against the individual errors of practice, but, with no such justification, against the mutual-assistance principle itself.

There is unquestionably need for better planning and better administration, but perfect results usually call for perfect personnel, which is hard to find instantly either at home or abroad. It is no easy thing to spend money wisely in the United States, as shown by the waste in our unemployment allowances, our highways aid or our housing enterprises, to give only a few examples. It is much less easy, even with the most enlightened effort, to spend money wisely in an underdeveloped country of the Far East or the Middle East which has no solid experience in government or administration or business or industry, and no true grasp of what we are doing or why, particularly when our effort is continuously exposed to harassment, both open and secret, from energetic local Communists eager and able to exploit every opportunity.

Easy or difficult, clearly successful or temporarily blocked, the task of tightening each of these alliances must be carried out, past mistakes corrected, current plans revised to meet ever-changing requirements, however exacting. It would be pleasant to be able to look forward to a date in the calendar inscribed "Success," or even on the map to a section of the road marked "Easy Grade." But there is no such bright prospect ahead. Rather, today's Job

must try to find comfort in Trotsky's sardonic remark of many years ago, to the effect that anyone who likes a quiet life made a great mistake by being born in this century.

Why Military Aid Is Needed

The principle of strong defensive alliances, with the inevitable accompaniment of mutual aid, which means a very large and continuing program of military, economic, financial and technical aid from the rich ally to the needy ally, is a major element of our national military policy. An alliance is an empty thing without the assistance which strengthens the ally and hence the alliance. Unhappily, it is necessary each year to argue this issue anew. This re-arguing is needed not because the Fortress America isolationist concept really influences American thinking today to any important degree, but because a great many people in public as in private life continue to ask two questions: how long the considerable financial drain must go on; and why, considering the growing financial stability of Britain, France and particularly West Germany, and what seems like profitless outlay and "ingratitude" in other areas of the world, it is not possible to reduce our outlay in Europe and end it elsewhere. This is not the moment to deal with all aspects of our foreign policy. What is here under review is our national military policy, and two points can be briefly made in this connection.

(1) The amount of money spent to assist ally A, for example, raises and equips an effective indigenous force very much larger than a United States force which the same amount of money could raise, equip and support. The contribution to the total strength of the alliance, therefore, produces a measurable fiscal benefit to the United States, plus a political-military benefit which is real and certainly large, but not susceptible of measurement.

(2) In substantial support of this last point, the Joint Chiefs of Staff have stated that, rather than "save" money by cancellation of the mutual assistance moneys, they would sacrifice a similar amount from the defense budget itself. It is difficult to present a

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more persuasive statement of the very large role which, by professional estimate, the foreign aid program performs in the total of United States military policy.

Value of Allies

The overseas ally provides troops and equipment. He also supplies an invaluable geographical position which maintains, from one point of view, a well protected bridgehead ready for our use in bringing up support and, from another point of view, a strong base invaluable for defense. He supplies, on his territory, a network of highways, railroads, wire and wireless installations, airfields, an established supply system, all facilities for housing and for remobilization, and a presumably friendly civilian populace whose value in an emergency is very great indeed (let us remember, again, the wisdom of Alexander the Great in either finding such a population or creating one).

The ally has one other aspect which is quite possibly on occasion the most important of all: if our first aim is truly to prevent war rather than to wage it, the ally can be of inestimable value at the first threat of danger, not merely as a respectable barrier to aggression but as an actual, sincere and devoted exponent of peace, from self-interest as well as from friendship for the United States. Viewing the alliance principle upon a coldly practical basis, one finds that the grants in aid are very far from being wholly debits.

Even so, the foreign aid appropriations and expenditures are habitually carried in budget categories as items separate from direct "defense" outlay, although, as just pointed out, they are in a great many cases as useful to our whole defense as are our own battalions and squadrons. Yet to be sure, it is our own military establishment on which we must primarily rely for the military strength needed to support national policy. What, then, determines the extent and the character of our military strength, as determined by our national policy?

U.S. Military Strength

THE MILITARY STRENGTH OF THE UNITED STATES, like that of other nations, consists of more than the number of land, sea and air units, and more than the form of their organization for use in war. Both ingredients are determined by factors which, in theory, have been accurately discerned and appraised and reappraised in the light of world developments—political, economic, psychological, technological—which create both new requirements and new capabilities.

Again and again we must prod ourselves into awareness that war itself *is* an extension of political practice, or else we shall fail totally to understand the fits and starts of military planning. This is one factor determining the nation's – any nation's – military policy. We must also force ourselves to remember anew that weapons and related tactics are constantly becoming obsolete and constantly being replaced – by planners who are alert to change – with new weapons or new tactics or both.

Nazi Germany's awareness of this fact and its exploitation in 1939-40 demolished one nation which was not alert in two weeks, and three more in as many months. Germany had, among others, one crowning advantage; it was the aggressor, and hence it could make all its attack plans under perfect conditions. That is, it could pick its time, raise its units of shock forces, stock up with new and powerful weapons, provide the training, actually rehearse its command and staff in a perfected plan, and then strike the

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unhappy foe in a carefully selected weak spot before it even knew it was to be struck, much less where and when.

Defensive Posture Difficult

Today the United States, and the West as a whole, could be in the defender's unfortunate position. The free world is not aggressive. It has no intention of attacking, and this is so apparent in a multitude of ways that the Russian and Chinese cries of "capitalist warmongering" would be laughable were they not credited by communism's dupes. What the free world must do, however, is maintain a strong defensive posture, not in one place but everywhere, not against one form of attack but against every form of attack. The professional concentration and the financial cost which this requires—not merely in troop deployment but in foreign intelligence, in supply, in training, in scientific research for future equipment – is staggering. It is particularly difficult to maintain this defensive posture, day after day and year after year, in the face of indifference and apathy and active hostility on the part of a great many well-intentioned idealists who are sure, as were the French and British idealists of 1939, that the only real war danger is that which "militarists" keep conjuring up. Logically, war is waste and folly. Unfortunately logic is not man's supreme guide. Since 1945 there have been 18 wars because reason failed, and an unknown number prevented because the free world did *not* rely solely on the advice of idealism.

Can Retaliation Threat Avert War?

One of the profound chasms which divide even the professional guides of our military policy is itself attributable to the difference between one man's logic and another's. The premises are pretty well accepted by both. The conclusions reached on the basis of these premises, however, are wholly different. It is this fact, plus the fact that the separation is not between military and civilian, but between military and military, that has given rise to the many differences of opinion noted above.

The key point in dispute is this: Can all war be surely averted by a threat of massive retaliation? That is, will an aggressor be certain that, once he has taken the offensive, the free world will instantly retaliate with all the nuclear weapons still at its disposal, so that, whatever the ruin to the initial victim, the attacker will be assured similar ruin? Will good sense, therefore, prevent him from initiating the attack?

Those who believe in the efficacy of "massive retaliation" appear, in fact, to add to the vulnerable military concept that "attack is the best defense"—hence "the more the better." This theory is closely akin to the Douhet and Mitchell theory of World War I that massive air attack would surely crush all resistance. The Douhet theory most certainly was not proved by World War II nor by anything since then, but it is still widely believed in the United States Air Force. This theory was presumably at the root of the confidence John Foster Dulles long held in his doctrine of "massive retaliation." It must have had its effect in President Eisenhower's reasoning that "if we can win a big war, we certainly can win a little one"—although that, too, remains unproved and unprovable and, in the opinion of many, inaccurate in the light of the experience of the Korean war.

Faith in 'Big' Weapons

Nonetheless, it is certain that the defense policy of the United States continues to be dominated by the "big-weapon" concept. To know this, one has only to survey the defense scene. The Navy's biggest weapons expenditure, by category, not only by Presidential plan but by congressional encouragement, is on the Polaris missile-plus-submarine system plus other instruments of nuclear capability. The Air Force's biggest expenditure, by far, is on the great ICBM's, coupled with other weapons of nuclear capability. The Army, which was the first of the services to develop several outstanding types of missiles, plus the first of our earth satellites, plus other forward-looking enterprises in rocketry which Charles E. Wilson in his reign as Secretary of Defense

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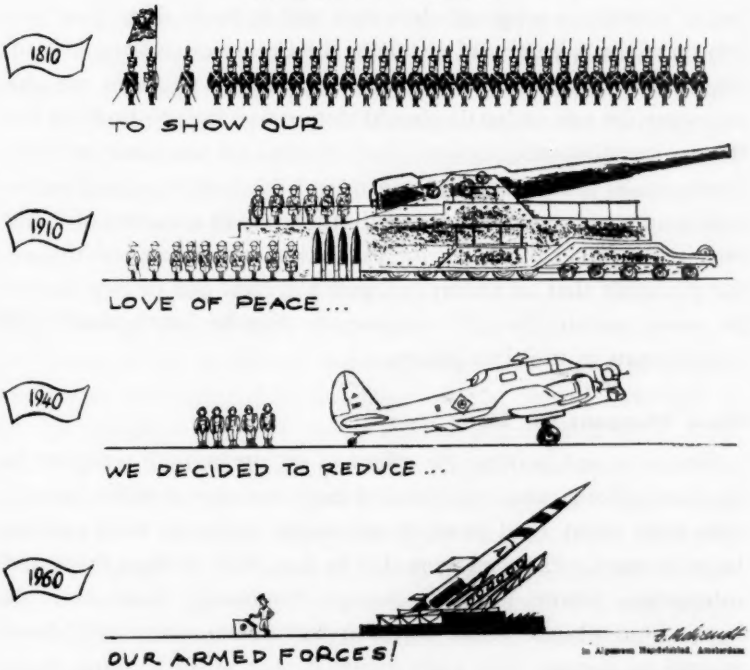

forced the Army research office to put on the shelf, has itself refused to be regarded as fitted only for "conventional" war, and has pushed boldly into nuclear armament, while still very sensibly (along with the Navy and the Marine Corps) seeking to improve greatly its capability for the nonnuclear conflicts which a great many observers believe are more likely to occur.

There is one simple explanation of this large degree of concentration on the big weapon. It is a conviction that massive powers of retaliation, constantly available and constantly ready for use, accompanied by the will to use them if forced to (and that is a vital element of the concept) are indeed indispensable.

They are necessary as a deterrent. Since nobody knows with certainty whether a supposed deterrent will actually deter (our possession of the A-bomb did not deter the Communists from assaulting our garrison force in Korea) these massive weapons are also necessary for use in battle should deterrence fail. Nobody in authority questions the nation's need for massive weapons, on land, at sea, under the sea and in the air. And the most respected strategists do not question the need of that weapon in a variety of forms and in a number of places, for use in several techniques—this on the principle that an enemy can guard against one or two threats far more confidently and competently than he can against multiple threats in multiple places.

Many Weapons for Many Uses

Hence we are making the effort to set up massive weapons in the form of long-range missiles and medium-range missiles, launchable from many land bases, from mobile trains or trucks whose location can be changed from day to day, from surface ships and submarines whose location changes habitually from hour to hour, from planes whose location can change ten miles from minute to minute. The only question that arises is about numbers, and this question brings understandable rivalry among the services, each of which believes that another service's "over-arming" lessens the money available for its own "essential arming." The time when we will see the end of such questioning within the services, most of it entirely sincere, is not in sight. But, to repeat, there is no difference of professional opinion on the main issue: that a sound military policy calls for the big missiles in quantity and in variety, and for continuous and expensive research and development to make sure that new technologies—in propellants, in guidance, in explosives, in structure—are exploited to acquire new powers.

The Rockefeller Brothers Fund in 1958 financed one of several important studies into the question, among others, of whether massive weaponry, however mighty, is alone sufficient as a deter-

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rent or, alternatively, as a means of offense – and also defense, should the deterrent fail and the nation be driven into war. Most of the studies have concluded that it is not sufficient for either purpose, and such a highly qualified professional as General Maxwell D. Taylor, Chief of Staff of the Army from 1955 to 1959, has contended that mutual deterrence, with both United States and Russia deterred from use of nuclear weapons, could make limited, "fringe" war more likely. Again, Capt. Liddell Hart supports this belief.

How About Small Wars?

The reasoning is that an aggressor might risk embarking on a small war because of his confidence that it would not lead to a large one. Both General Taylor and his successor in office, General Lyman L. Lemnitzer (who in August was nominated as chairman of the Joint Chiefs of Staff, succeeding General Nathan F. Twining), have gone even further. They disagree with the theory, an extension of that propounded by Douhet, that even an all-out war would be a one-stroke affair, with the lesser-hurt of two antagonists picking himself out of the ruins as an assured victor. The Army's leaders, with increasing support from civilian experts who have studied the probable effects of nuclear attack, insist that after the period of devastation from nuclear weapons there would be a partial recovery by both antagonists and a resumption of battle with the nonnuclear weapons better suited to gaining control of the terrain and its surviving occupants.

Would either nation be able to rally from the initial nuclear holocaust costing millions of lives and wrecking cities and industries? it is asked. The answer of Army leaders is that Russia *did* in fact rally from a German onslaught in 1941-42 which, as pointed out by Raymond L. Garthoff in his book, *Soviet Strategy in the Nuclear Age,* deprived Russia of millions of trained soldiers, control of 40 percent of its population, 40 percent of its grain production, 60 percent of its basic metals and 95 percent or more of certain key military industries. Yet from this vast devastation,

comparable to what an all-out nuclear attack could wreak, Russia rallied so completely that it eventually gained a dramatic victory over the Germans on the Eastern front.

From this analysis, according to the Army, it follows that the United States can by no means rely solely on the massive powers of nuclear weapons. Once the atomic blasts are over, the Army contends, conventional fighting would follow. There are thus two possibilities, not one. If mutual deterrence from the use of nuclear weapons is actually and permanently effective, there is unquestionable need for a defense establishment extremely potent in conventional, nonnuclear weapons, capable of fighting or, better, deterring another Korean war. On the other hand, if mutual deterrence does *not* deter, and all-out attack and counterattack take place, then the nonnuclear weapons and forces will be necessary for the succeeding phases of a ground war.

According to this analysis the Army requires possession of a dual capability, for nuclear fighting if need be and for nonnuclear fighting in any case. In 1960 increasing respect has become evident for the Army's program of "modernizing" its forces to fit them for both contingencies. The President's budget requests included a modest sum for this modernizing. The House bill, by rearrangement of items, proposed somewhat more money, and the Senate bill a great deal more; the final measure went far above the President's wishes—adding $162 million, plus a possible further $120 million from sources which may develop during the year. It appears that the dual needs of defense are becoming better understood, and that the Army's persistent efforts for improvement of its capability now begin to get their reward.

This development, then, represents a further current revision of the nation's defense policy, the extent of which is yet to be determined. It includes increased attention to our defense forces' nonnuclear capabilities through the provision of equipment permitting much greater mobility both to and in the battle area, much greater firepower within small units, much wider dispersion of combat elements, and much more efficient means of communi-

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cation and command which all this requires. Elements of this development are a greatly improved long-range airlift; swifter battle-area transport by plane, helicopter and armored carrier; and lighter yet more effective small-unit weapons, now available as soon as appropriations provide the money—and the Administration allows its actual expenditure.

'Limited War' Capacity

In the reorientation of defense thinking there has been yet another departure from the past almost total concentration on our powers of "massive retaliation," which too long blinded the Administration to the need for additional means of deterrence, and of resistance if need be. The less massive weapons—new, powerful, mobile, possessed in adequate quantity by forces well trained in their use and well dispersed and commanded—can in fact serve effectively as a deterrent to the "small" war, the "fringe" war, the "limited" war, which might lead to graver struggles. What has been presented as an Army argument applies equally to other services. But these are all obviously *active* elements of deterrence or, if need be, of combat. There also are less active, purely defensive deterrents and even a *passive* deterrent, which must be added to calculations.

The former group is made up of air-defense forces—that is, those whose aim is to block enemy air attack on the continental United States, now at the highest level fully integrated with Canada in NORAD at Colorado Springs. NORAD does not carry attack to enemy installations. It defends the homeland only. It employs our electronic early-warning systems, whose alarms of an enemy approach reach NORAD with astonishing speed and, in theory, trigger three vital reactions. Of these, one reaction, while defensive only, employs weapons—namely, our interceptor powers, both airplane and surface-to-air missiles, which are alerted. A second and vital reaction affects our most powerful retaliatory forces, the Strategic Air Command and the various naval elements, which are similarly alerted and thereby enabled both to move away from

their threatened bases and to prepare our counterattack. Here, obviously, with plane and missile, is the nation's prime deterrent and prime weapon. The third main reaction from the warning to NORAD is a purely defensive—and weaponless—operation of incalculable importance, and is the often forgotten element of deterrence. This is NORAD's signal to the nationwide Civil Defense establishment, enabling it to spread the alarm to as many civilians as possible in the threatened area in an effort to get them into such protective shelter as is near at hand.

Plans for Civil Defense

To be sure, not a shot is fired at the enemy. Yet the certainty of this wholly passive operation has in it a genuine deterrent effect. For an enemy attack is decided upon only after calculation of the damage it will inflict. The damage includes lives. If a proper Civil Defense is believed able to save half the lives in an impact area, the immediate damage in that respect would be reduced one-half, and the enemy calculations would be adjusted accordingly. This is the deterrent aspect of Civil Defense. Its other aspect of saving American civilian lives hardly seems to require discussion—yet the plain fact is that it does. One of the most helpful high-level reminders of this came from General Lemnitzer, when he addressed the National Association of State and Territorial Civil Defense Directors on April 6 in Washington, D.C. For the first time in memory a Pentagon chief stressed the military's own obligation to assist in providing maximum help to civilians by constructive and well-planned measures. This is a significant aspect of our widened defense policy.

Equally significant is the determination with which, at the Governors' Conference at Glacier National Park, the defense committee of the conference strengthened its 1959 declaration that the National Guard must greatly extend its traditional functions and without delay prepare for a major role in national and regional recovery after a nuclear attack. Progressive leaders within the National Guard and the president of the Society of Medical

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Consultants to the Armed Forces, Dr. I. Ridgeway Trimble, have supported this concept. Here is firm acceptance of a belief that nuclear destruction is not total, that a nation must develop the power of recovery from a nuclear attack, and that, if prepared physically and morally, it will rally and renew the struggle for victory.

Is Recovery after Nuclear War Possible?

"If prepared physically and morally" is a serious condition to that confident conclusion. Granted such high-spirited determination to achieve recovery as was shown by the governors' committee and by numerous devoted National Guardsmen, is it physically possible for a community to rally from the ruin wrought by an H-bomb? or for a group of communities to do so? and hence for a nation? Russia's recovery from 40-60 percent destruction by Germany in pre-A-bomb days is a challenge to other nations. But how about Hiroshima? And how about that little Pacific island which ceased to exist when our first H-bomb test was conducted? For now we see almost total destruction by blast at and near the impact point, and continuing destruction by radioactivity spreading over a much wider area and becoming a component of air and soil and food and water.

That survival chances in atomic warfare are far less than Russia's in preatomic World War II seems certain. One therefore can understand (even while one opposes the Air Force's reasoning, which extends Douhet's air strategy) that there is no rational protection from the H-bomb. If this is the case, then the nation in fear of nuclear attack can deter use of the bomb only by threat of sure and massive retaliation. There are some in Washington who accept this policy of despair, but there are also others who on the contrary still hold that (1) certainly, we must possess that massive power, must be ready to exercise it instantly, must have the iron will to do so, and must make sure that every hostile state knows these to be facts; and that (2) this advance knowledge would discourage a rational enemy from risking his own ruin;

but that (3) reason does not guide an irrational foe, and hence we must seek protection from an irrational and unpredictable act; and that (4) man's ingenuity and industry must, and hence can, devise some measure of protection, however baffling the problem is today.

Chances of Survival

The sober statements of General Lemnitzer, the governors and leading National Guardsmen show a willingness to grapple with this dreadful reality and to make a start on a staggeringly difficult task. But it is no more than that. Some of the most respected nuclear scientists are convinced that the task of survival after a nuclear attack is not merely difficult but impossible, and it is not possible today to disprove their gloomy belief. Yet others, equally respected, stubbornly assert that man has not yet created the ultimate in destruction, or in anything else, and never will. It is so short a time since people "knew" that man could never fly, that there were "unconquerable" barriers to supersonic speed and that it was "impossible" to do a hundred things which today are commonplace. Some radical but absorbing views about "The Nature and Feasibility of War and Deterrence" by Herman Kahn of The Rand Corporation raise doubts about the cataclysmic or annihilating effects of the new warfare, note Russia's current preparations for coping with disaster and suggest the urgency of devising temporary expedients while awaiting long-run techniques of security. Says Kahn, "You cannot reach 1970 or 1975 if you do not successfully pass through 1960 and 1965."

The reference to early-warning systems as an essential link in our continental defense measures requires further discussion, for the advance in early-warning technology is as revolutionary as is our leap forward in missilery, and has a comparable relationship to our whole defense policy. It is only a few years since the United States and Canada finished the main section of the so-called Distant Early Warning line (DEW-line) across northern Alaska and Canada with seaward extensions toward Midway in

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the Pacific and Bermuda in the Atlantic. This line was designed to detect enemy bombers flying across the Arctic and to alert our defenses. The DEW-line still serves that purpose. But it would be impotent against enemy ICBM's flying in so high and so fast, making the DEW-line's instruments of detection now primitive.

This spring, accordingly, we tested still further north, at Thule, Greenland, the first of three Ballistic Missile Early Warning System (BMEWS) installations, which is expected to be in full operation this fall. It is designed to discern an enemy ICBM 3,000 miles away and to give instantaneous warning to NORAD, permitting the defensive (and counteroffensive) steps previously mentioned. The process has the almost-magic character that modern electronics possesses. It enables us to see that, more and more, instead of defense policy leading to new technology, new technology makes possible new aspects of a nation's defense policy. Ability to detect and track an enemy ICBM will be supported one day by ability to destroy or neutralize it in mid-air. This is the aim of the Army's anti-ICBM, the Nike-Zeus project, now in advanced development. Late in 1961 the Army will test Zeus's ability, firing from Kwajalein Atoll, to intercept 18 Atlas ICBM's launched from California, 4800 miles away.

New Weapons Under Way

One must again examine defense practices—the instruments of policy—to see that in yet other respects the military professionals of late have been backing away appreciably from overconcentration on the ICBM's as a sufficient and sole deterrent. The Air Force (which has long emphasized massiveness) has concluded that a good deal more is required. Thus it put up a fight for the proposed F-108, a defensive interceptor which was to have a speed three times that of sound (mach-3). This fight failed because of the official ruling that the F-108 was ineffective against ballistic missiles on which the Soviet Union was now placing emphasis. The Air Force then went firmly for its B-70, a bomber, also by radical

design plus propulsion capable of mach-3 cruising speed, long endurance and great altitude, and thus promising numerous useful applications. The B-70 project was not killed, but it was certainly deferred by the Administration last spring, only to have Congress pick up the Air Force's own fight and provide $190 million in additional funds to bring that promising weapons system to reality, as well as a possible further $100 million, made available for additional fighters which could, instead, be used for the B-70. The Air Force also gave more vigorous support than did the Administration to the proposal for a greatly enlarged airlift (an Army requirement), and here again Congress finally appropriated $200 million more than the White House wished.

In something like the same spirit, the Navy, fully cognizant of the enormous value of the Polaris submarine-launched IRBM, still was willing to sacrifice some of its desires in order to acquire an eighth "big carrier," which the Navy unquestionably needs for the full efficiency of its attack carrier forces with their own dual capability for all-out or for limited war. As previously mentioned, the President supported the Navy's plea; strangely the House denied it, but in joint conference yielded to the Senate's firm insistence.

What About CBR Warfare?

No new policy has yet been announced with regard to the CBR warfare techniques. There is undisguised public repugnance to our use of poison gases, lethal or otherwise, or of biologicals destructive to crops as well as to animal life, or of radiological attack with its harsh reminders of Hiroshima. Yet Russia's known preparation of weaponry in these areas and of defenses against them for civilian as well as military use makes our own defense authorities aware of the reality of this threat. Army research has long been directed, more or less secretly, to this problem, first in quest of defenses, second in quest of counteroffensives. In 1960, for the first time, research chiefs have spoken publicly and bluntly about the need for actual arming in this respect and, significantly,

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(Official U.S. Air Force Photo, released by the Department of Defense)

A view of the 400′ x 160′ antennas at an Air Force Ballistic Missile Early Warning System installation in Thule, Greenland. It will be in full operation this fall.

have not been reproved for it. Here, too, it seems clear that at some stage another radical change is developing in the nation's defense policy.

Space Weapons

It is equally clear that national defense must concern itself very much more with space than it has done in the past. The great ballistic missiles enter space, but only briefly, for they are designed to leave it promptly and with maximum precision, to strike a target on earth. The true space vehicles will travel through space, some as satellites, some as space probes, some as navigable space-vehicles with a military potential (reconnaissance,

communications or actual combat) which challenges definition today. The President undertook in his January 14 message to Congress to draw a clear line between "military" vehicles for Pentagon control and "scientific" vehicles for National Aeronautics and Space Administration control, but evidence is already available that there can be no sharp line permanently separating the one from the other. Hence here, as elsewhere, technology's rapid changes make it difficult to arrive at a firm statement of policy—with technology once more not a mere servant of policy but almost a master. The problems are stated more easily than the answers.

We come once more to the matter of money. Some of the projects referred to as still under development, rather than awaiting production order, are in that limbo quite plainly because their production cost will be immense and the Administration, alarmed over the great costs of today's defense and the far greater cost of what the several services would like, has insisted that a project be fully proved before it goes into production. This applies to Zeus, whose ultimate cost, once its merit is fully proved, would depend on the number of installations it needs. This applies equally to the B-70. Both prospects can be measured in billions. It applies also in some measure to the Polaris, which now is so near its final proving that the Congress insisted on pushing it faster than the Administration planned. It applies to a great many of the big-missile developments. The business community, of which the Chamber of Commerce of the United States is a reliable spokesman, is clearly worried about defense costs and their threat to the nation's economy, and has urged caution in spending. The more extreme advocates of bigger defenses, in men and weapons alike, call just as emphatically for more appropriations.

The President's stated view is that he has asked "enough." It must be noted that his judgment of "enough" for 1961 is singularly close to the defense outlay for 1960. To stay within the limit set by the President it is necessary to postpone production of items which the military professionals hold to be vital to our

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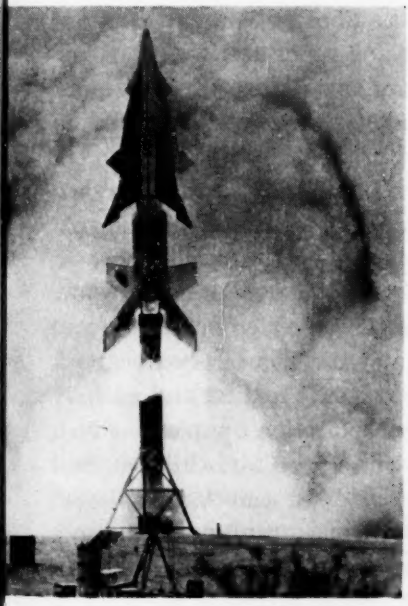
Decontaminating a tank after being caught in a simulated land mine and chemical gas attack during an exercise ▶



◀ The Nike-Zeus, our only anti-missile missile, which will be tested in 1961

Davy Crockett—smallest nuclear weapon, just coming into operation ▶

(U.S. Army Photographs)

future defense. This would seem a calculated risk of time, which is irrecoverable. The justification for that risk is yet to be proved, or disproved.

Arguments for Disarmament

Whether the pressure for more potent armament be restrained (as is that of the President) or severe (as is that of many critics regardless of political party), few leaders in Washington deny the necessity of some degree of pressure in view of the violent threats of Communist countries, large and small, and of certain grave weaknesses in our armaments. Those who argue earnestly for a slowdown rather than a speeding up of armaments are appalled, either for economic reasons, by the mounting cost of weapons or, for more idealistic reasons, by the conviction that an arms race inevitably leads to war.

Both these elements have long existed, both have distinguished spokesmen, both have had their anxieties increased in the past decade by the frightening development of new weapons whose costs are vastly higher than those of earlier weapons, and whose lethal character threatens ruin not only greater in volume and extent but wholly different in kind. An all-out H-bomb attack must by design inevitably destroy not only soldiers and military resources but also industrial and transportation complexes, which means great cities populated by men, women and children. Still worse, it is pointed out, the radiation from a nuclear explosion may so distort the surviving reproduction organisms as to assure the deterioration of an unknown number of generations yet to come.

A number of respected scientists, therefore, have taken the lead not only in pressing for international nuclear disarmament and a permanent halt to the testing of nuclear warheads, but have gone far beyond Administration policy in urging that the United States "set an example" by halting nuclear tests unilaterally and without exacting conditions in return. This particular approach does not have wide support either official or unofficial. The reason for this is plain. Unilateral disarmament or a

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major move in that direction places the reforming nation in a relatively defenseless position with respect to its nonreforming rival, as Alexander Hamilton discovered when he refused to raise his dueling pistol against Aaron Burr. If the rival nation is already notorious for its overpowering of defenseless neighboring nations, the temptation to disarm is not persuasive. It is for this reason that the United States and the West in general have maintained their effort to negotiate with Moscow, but on a step-by-step basis and with some means of clear assurance, probably through mutual inspection, that each party to the agreement will keep its promise.

Moscow's record of broken pledges gives small encouragement to trust in further unsupported pledges by the U.S.S.R. It must be borne in mind that after World War II the West actually began demobilizing even before VJ-Day in 1945, and trustfully continued demobilization until the Communist coup in Czechoslovakia called for a return to realism in appraising international prospects. Since then, it is painfully clear, the United States has been compelled to set up its new foreign policy, plus its supporting military policy, including rearming, on the basis of a response to our opponent rather than on what would be considered an ideal basis. That is, there has been a recurring necessity to cope with an outside threat and to prepare for the need to match that threat with a sufficient defense establishment.

Here, again, the key word is "sufficient." And what is the measurement of sufficiency? What else can it be, at this time in history, than enough armed strength to meet a Communist threat, in whatever continent it may occur? Preferably our arming will be so visible as to deter war, but if a war of aggression should come nevertheless, the free world must have the power and the will to defeat the aggressor and to remain free.

What Is 'Sufficiency'?

If the determination of sufficiency were possible through logic, life would be pleasanter in the Pentagon, at the Capitol and in the White House. But through whose logic? It is not that of

Zealot A, undoubtedly earnest, who wishes us to match Russia man-for-man and tank-for-tank and missile-for-missile—nay, to outmatch Russia, counting on this new and temporary superiority to overawe the foe. Yet it is not the logic, either, of Zealot B, just as earnest, who firmly believes that the United States must lead in disarmament to the extent of abandoning nuclear weapons unconditionally, hoping that this demonstration of good will and good faith would be copied by others. The first proposal seems sure merely to stir the foe into further competition in fury; the other would encourage a potential foe not to undertake a corresponding disarmament, but to engage in safe ventures such as Moscow's post-World-War-II take-over in Eastern Europe. Somewhere between these two extremes, then, must lie "sufficiency," but just where? And how can we cope with the curse which undeniably attends armaments competition—the repeated response to each challenge by a rival?

In theory, there is no way of coping with that curse, for the fear of a foe's large newer weapons is indeed a stimulant to obtaining, in turn, larger and more numerous weapons—and not necessarily for aggression. A purely defensive posture obviously calls for a sure means of defense. In practice, however, an end to this spiraling of armaments is imposed by necessity, for at some stage the money runs out, often before reason reasserts itself. President Eisenhower has consistently sought to put the brakes on military expenditures. Until this year his restraint apparently met with majority approval. A most impressive fact of mid-1960 is that this time Congress—and primarily because of the renewed bellicosity of the Communist states—has applied a different reasoning.

Hard Reality Must Be Faced

Being human, and living in a real world, we must be guided not only by abstractions but by realities. Good will and generosity and neighborliness are not enough. It is a painful fact that if Russia, or China, makes a new threat, we must be prepared to counter it. After all, our own firm military action in Greece and

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Turkey is all that saved Greece and Turkey from being overwhelmed by Russia, as Latvia, Lithuania, Estonia and Poland had already been, and as Czechoslovakia was to be later. The West's firm action and a superb year-long airlift are all that saved West Berlin. Our firm leadership in an unexpected crisis is all that saved South Korea and, later, Formosa and its little islands. With these events as illustrations of a logical principle, it seems clear that neither now nor in the future can the United States or any other nation devise an armaments policy as though we lived in a happy and well-disposed world, when it is nothing of the sort. The nation's policy must take full cognizance of the hard realities over which we have no control and on which we seem only rarely to have even an ameliorating influence.

After all, this is not a unique situation. In our municipalities we have police, not to balk good people but to keep bad ones in order as fully as possible. When gangsters multiply and their operations intensify, we get more police, better equipped. That is, our strengthening or weakening of our domestic police is not determined by abstract ideals, but by plain necessity. A philosopher would have difficulty in concluding that, while gangsters flourish, the New York police force should be reduced.

He would have similar difficulty in predicting, while communism rages, any effective reduction in the nation's armaments. So mild and scholarly a thinker as President James P. Baxter 3rd of Williams College, warned the Executives Club of Chicago on April 22 that our scrapping of nuclear weapons could mean Russia's world domination. The auguries indicate that the West's arms reduction will occur only at a pace comparable to that of the Soviet bloc. We can lead in that much-desired program, but only cautiously, a step at a time, making sure that our self-proclaimed and dedicated foes do likewise.

Timetable of New Weapons

The accumulation of new weapons is dependent on adequate planning, adequate funds for the research-development-test stages, industrial competence, timely scheduling, funds for actual production and, of course, intelligent management. Poor performance in any of these areas at any stage brings delay in operational readiness, and a superior weapon which is fully proved but not yet manufactured is a mere bird-in-the-bush. It is necessary, therefore, to distinguish between (A) weapons already in the hands of our forces and being used in large quantity, (B) weapons just coming into field use and (C) weapons some years away from full readiness.

Surface-to-Air Missiles

In category A, among the new surface-to-air missiles:

HERCULES (Army), an antiaircraft defense weapon rapidly replacing the earlier Ajax, which had already replaced all the World War II antiaircraft artillery, nuclear.

HAWK (Army), a superior weapon against planes approaching at low altitude, which would elude Hercules' powers of interception.

BOMARC A (Air Force), a longer-range type, an advanced version of which was discouraged by Congress. Nuclear and conventional.

TALOS (nuclear), Terrier and Tartar (Navy), all effective at moderate ranges.

In category B:

RED-EYE (Army and Marines), a bazooka type for infantrymen's own defense against close air attack.

BOMARC B (Air Force), an advanced version of Bomarc A, particular improvement being increased range and guidance.

In category C:

MAULER (Army), a more efficient defense for infantrymen against close-in planes and short-range ballistic missiles.

NIKE-ZEUS (Army), the only weapon now under development for defense against ICBM's.

TYPHON (Navy), a marked advance over Talos and Tartar.

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Surface-to-Surface Missiles

In category A:

LACROSSE (Army), a mobile nuclear replacement for field artillery.

SS-10 (Army), a French-developed, remote-control (by trailing wire) antitank weapon of high precision.

CORPORAL (Army), a 75-mile weapon, nuclear.

REDSTONE (Army), a 200-mile weapon, nuclear.

HONEST JOHN (Army), a mobile nuclear rocket of 12-mile range.

REGULUS (Navy), a 500-mile weapon, nuclear.

SNARK (Air Force), a 6,300-plus mile weapon, in addition to carrying nuclear weapon it can carry electronic devices which will confuse enemy air defense and radar network. Stellar and inertial guidance.

MACE (Air Force), "A" model, a 750-plus mile weapon, subsonic nuclear, inertial guidance; "B" model, 1000-mile range.

ATLAS (Air Force), a 9000-mile weapon, nuclear, first of our ICBM's and a prime element of war deterrence. Inertial guidance.

In category B:

SERGEANT (Army), a replacement for Corporal, nuclear.

PERSHING (Army), a 300-mile weapon capable of far greater range, replacing Redstone and providing quite new potential, nuclear.

DAVY CROCKETT (Army), smallest nuclear weapon yet developed, operated by two soldiers, and a significant step in low-yield atomic weaponry.

LITTLE JOHN (Army), a highly mobile replacement for Honest John, nuclear.

POLARIS (Navy), nuclear, the mighty submarine-launched missile of 1,100-plus mile range, operational this fall and quite possibly our most important war deterrent of near future.

TITAN (Air Force), 6,000-mile, nuclear, a companion to the Atlas ICBM. Inertial and radio guidance.

In category C:

MINUTEMAN (Air Force), the most promising ICBM, nuclear, mounted on mobile railroad cars which will be moved periodically to confuse enemy targeting strategy; additionally housed in hardened sites.

MISSILE A (Army), a nuclear rocket to replace most of our light and medium artillery (Missiles B, C and D also contemplated for longer ranges and other tactical missions).

COBRA (Marines), a German-made, very mobile short-range weapon much like the Army's SS-10 and, like an SS-11 for the Army, now being evaluated.

Air-to-Surface Missiles

In category A:

BULLPUP (Navy), a 3-mile weapon for demolition.

ZUNI (Navy), a smaller missile for close support of ground forces.

HOUND DOG (Air Force), a 500-mile weapon carried by the B-52 bomber which can discharge this powerful nuclear missile while the plane itself is "standing off" far from the target and the enemy's local defenses.

In category B:

(None save later models of the above).

In category C:

SKY BOLT (Air Force), a 1,000-mile stand-off weapon of ballistic type, nuclear, development stage.

Unidentified Navy projects mentioned vaguely when the Navy this past summer abandoned its Corvus missile project after $80 million outlay on it.

Air-to-Air Missiles

In category A:

SIDEWINDER (Navy, also used by Marines and Air Force), extremely effective device for homing on enemy plane's exhaust heat. An advanced type, Sidewinder C, now under development.

SPARROW III (Navy), a marked advance over earlier Sparrows which had replaced the World War II "Holy Moses" HVAR, with further advances now under development.

FALCON (Air Force), one of the smallest of missiles, effectively used by several planes including the very fast F-106.

In category B:

GENIE (Air Force), a nuclear rocket.

In category C:

EAGLE (Navy), a high-performance rocket adapted to use by slow planes.

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Antisubmarine Missiles

The Navy has and is developing missiles which variously combine the depth bomb and the torpedo with aerial flight in order to reach the target at longer ranges and in less time.

In category A:

WEAPON ALFA, now mounted on destroyer-escorts.

In category B:

ASROC, for mounting on destroyers and cruisers.

In category C:

SUBROC, to be launched from a submarine into the air, eventually returning to the sea for diving into an enemy submarine.

Other New Weapons

Similarly a host of weapons other than missiles must be recognized as in A, B and C categories. The Army's modernizing depends not merely on the success in designing and producing relatively few of its excellent new instruments, but on whether it is allowed funds for much swifter procurement of its new rifle and machine gun, its M-60 battletank, its lightweight armored personnel carrier, self-propelled guns and howitzers, its newly efficient helicopters, battlefield airplanes, cargo transporters, engineer and signals equipment, and so on. Many of these are in category B simply because the money flow has been too slow to put them in category A.

Several of the more glamorous weapons, notably those of the Air Force, are delayed as much by the state of the arts in technology and design as by funds shortages. DYNA-SOAR (a boost-glide vehicle for orbital flight) will come to partial test next winter. X-15 (a purely experimental type) in its testing has exceeded mach-3 speed. This spacecraft will ultimately reach speeds between 3,600 and 4,000 miles per hour. SAMOS (the reconnaissance satellite) and MIDAS (the missile-defense-alarm system) are probably coming along as fast as the money available can push them. The Air Force's mach-2 B-58, the world's fastest bomber, will have its first squadron out this fall, a welcome addition to the indispensable heavy bomber B-52, which, with Hound Dog missile, is one of our major war deterrents for some time to come. The mach-3 B-70, a truly revolutionary type, stimulated at last by more funds, is still in category C, and unlikely to arrive before 1964.

Talking It Over

IN THIS DISCUSSION GUIDE YOU WILL FIND discussion topics, reading references and recommended visual aids arranged for a series of eight meetings. These are suggestions only—a starting point to help you plan a study-group program or a classroom teaching unit.

For further suggestions or for assistance in organizing a discussion series or study project, write to Foreign Policy Association - World Affairs Center, 345 East 46th Street, New York 17, New York.

Discussion Questions

1. National Objectives of the United States

Have our national objectives changed since World War II? If so, in what respects? for what reasons?

In your opinion, what changes have been more important in affecting our policy—technological, or political? What political and technological changes since 1945 seem most important to you?

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2. Character and Cost of Defense Program

Is the defense program of the United States, as measured by the budget for 1961, adequate for this country's needs? Are the proposed expenditures appropriately divided for effective resistance to different types of war?

What is the view of President Eisenhower? What do Pentagon leaders think?

Do views of civilians differ from those of military? Do the military disagree among themselves?

What do experts outside the government say?

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3. Problems of Cold War

Can the cold war be fought for the same objectives and by the same methods as the wars of the past? if not, why not?

How effective are political techniques in military operations? in military negotiations?

What political methods does our principal potential opponent, the U.S.S.R., use? Should we use similar methods?

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4. The Weapons Debate

The layman, who has at best only a superficial knowledge of weapons, their capability, their usefulness at any given time, the quantity in which they should be produced, and the price that should be paid for them, feels bewildered by the weapons debate in Washington.

How are we to determine who is right in this debate? What are the views of the President? Who are his major critics? What are their grounds for criticism?

Are there conflicts, or similarities, between the criticisms of military and civilian critics?

To what extent, and in what respects, does Congress agree or disagree with President Eisenhower on defense?

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5. Government Organization and Defense

Is the United States government "properly organized to meet the challenge of the cold war?"—the topic studied by Senator Jackson's Subcommittee on National Policy Machinery.

What are the major criticisms of our government machinery? What recommendations have been made to adapt it to the needs of the space age?

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6. U.S. and Military Alliances

Are military allies an asset or a liability to the United States?

What is the role of NATO? In what respects does it need to be changed? Who are our allies in CENTO and SEATO?

What contribution do our allies make to the defense of the United States?

Have mistakes been made in our relations with military allies? If there have been mistakes, how should they be corrected?

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7. Big and/or Small Wars

What are the strategic plans of the U.S.S.R. for use of offensive and defensive measures in atomic warfare?

Does "massive retaliation" increase, or decrease, danger of "small wars?"

In what aspects of defense does the Pentagon do the most active research? Why?

What is the responsibility of the military for protecting civilians in the event of atomic attack?

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8. Prospects of Survival

Will nuclear warfare spell the destruction of both antagonists? Or is there a chance that there will be survivors?

What measures can be taken to assure maximum survival?

Should the United States focus its attention on devising means of offense and defense, and on opportunities for survival in nuclear war? or on measures to prevent war by negotiations for arms limitation and controlled cessation of nuclear tests? Should we work on both objectives at the same time? Or is it hopeless to negotiate on these matters with Russia?

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Visual Aids*

Atomic Timetable—Part II (Radiation and Fallout). Produced in 1958 by Edward R. Murrow and Fred W. Friendly for Columbia Broadcasting System Television "See It Now" series. 83 min. Rental, $15 from New York University Film Library, 26 Washington Place, New York 3, N.Y. Willard Libby of the Atomic Energy Commission, Hermann Muller, geneticist, Linus Pauling, physicist, and others discuss whether continued atomic testing would be a major threat to civilization.

Count Down. Produced in 1958 by United Nations Television. 29 min. Rental, $4.75, from Film Services, Indiana University, Bloomington, Indiana. Narrated by Peter Ustinov, the film gives an account of disarmament negotiations through 1957, tracing major East-West proposals, and showing discussion at the United Nations 12th General Assembly.

Exploring by Satellite. Produced in 1959 by Delta Film Productions. 30 min. black and white or color. Rental, write Delta Film Productions, 1821 University Ave., St. Paul 4, Minn. Describes space exploration and explains the purposes behind the United States satellite program.

* Unless otherwise noted, all films are 16 mm, sound, and in black and white.

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One World or None. Produced in 1946 by the National Committee on Atomic Information. 9 min. Rental, $3, from Yeshiva University Film Library, 526 W. 187th St., New York 33, N.Y. A plea for cooperation to prevent atomic war, stressing the destructive potential of nuclear weapons.

Quest for Peace. Produced in 1959 by WCET, Cincinnati, Ohio. 29 min. Rental, $4.75, from NET Film Services, Bloomington, Ind. Panel discussion of United States defense policies and disarmament program. Participants: Edward Kalzentach, Brandeis University, Captain John H. Morse, Atomic Energy Commission, William Messner, Jr., executive director of the Cincinnati Council on World Affairs.

The Race for Space. Produced in 1959 by David L. Wolper in cooperation with the United States Department of Defense, the United States Army, Navy, Air Force, National Aeronautics and Space Administration and the Ministry of Culture of the U.S.S.R. 54 min. For rental information, write McGraw-Hill Text Film Library, 330 W. 42nd St., New York 33, N.Y. Documents the race between the United States and Russia in missile development.

A Short Vision. Produced in 1956 by George K. Arthur. 7 min. color. Rental, $7.50, from Brandon Films, 200 W. 57th St., New York 19, N.Y. Animated film that starkly portrays a sleeping city as it is destroyed by an atom bomb.

The Weapons Revolution (Twentieth Century Revolutions in World Affairs). Produced in 1959 by KRMA-TV, Denver, Colorado. 29 min. Rental, $5.25, from NET Film Services, Indiana University, Bloomington, Ind. Discusses the problems of defense caused by the revolutionary changes in weapons since World War I.

What Hope for Disarmament (Prospects of Mankind). Produced in 1959 by WGBH-TV, Boston, Mass., in cooperation with Brandeis University, 59 min. Rental, $8, from NET Film Services, Indiana University, Bloomington, Ind. Moderator, Eleanor Roosevelt. Guests: Jules Moch, chairman of the French Delegation to the United Nations; Trevor Gardner, President of Hycon Engineering Company; Saville R. Davis, managing editor of *The Christian Science Monitor*.

Why NATO? Produced in 1957. 20 min. Rental, $4, Foreign Policy Association - World Affairs Center, 345 East 46th Street, New York 17, N.Y. Explains the background, mission and objectives of the North Atlantic Treaty Organization.

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